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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/505,449	
	Filing Date	February 16, 2000	
	First Named Inventor	George Borden IV	
	Art Unit	2621	
	Examiner Name	Czekaj, David J.	
Total Number of Pages in This Submission	17	Attorney Docket Number	7146.0045

ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, <u>Brief</u> , Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Check in the amount of \$500 Return Postcard
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm	Chernoff Vilhauer McClung & Stenzel, LLP Suite 1600 601 S.W. Second Avenue Portland, OR 97204		
Signature			
Printed Name	Kurt Rohlf		
Date	March 5, 2007	Reg. No.	54,405

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Signature			
Typed or printed name	Kurt Rohlf	Date	March 5, 2007

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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FEE TRANSMITTAL for FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 500

Complete if Known

Application Number	09505,449
Filing Date	February 16, 2000
First Named Inventor	George Borden IV
Examiner Name	Czekaj, David J.
Art Unit	2621
Attorney Docket No.	7146.0045

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify) : _____

☒ Deposit Account Deposit Account Number: 03-1550 Deposit Account Name: Chernoff, Vilhauer, McClung & Stenzel

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee(\$)	Fee(\$)	Small Entity Fee(\$)	Fee(\$)	Small Entity Fee(\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description

Each claim over 20 (including Reissues)

Small Entity Fee (\$)

50

Each independent claim over 3 (including Reissues)

200

Multiple dependent claims

360

Total Claims

Extra Claims

Fee(\$)

Fee Paid (\$)

_____ -20 or HP= _____ x _____ = _____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims

Extra Claims

Fee(\$)

Fee Paid (\$)

_____ - 3 or HP= _____ x _____ = _____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims

Fee (\$)

Fee Paid (\$)

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets Extra Sheets Number of each additional 50 or fraction thereof Fee (\$)

_____ - 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____

4. OTHER FEE(S)

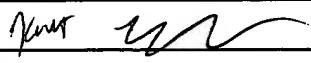
Non-English Specification, \$130 fee (no small entity discount)

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Fees Paid (\$)

\$500

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	54,405	Telephone	503-227-5631
Name (Print/Type)	Kurt Rohlf	Date	March 5, 2007		

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: George Borden IV Group Art Unit: 2621
Serial No.: 09/505,449 Examiner: Czekaj, David J.
Filed: February 16, 2000 Customer No.: 55648
Conf. No.: 5400
Title: METHOD OF SELECTING TARGETS AND GENERATING FEEDBACK IN
OBJECT TRACKING SYSTEMS

APPELLANT'S BRIEF

Chernoff, Vilhauer, McClung, and Stenzel, L.L.P.
601 SW Second Avenue, Suite 1600
Portland, Oregon 97204

March 5, 2007

Mail Stop APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

BACKGROUND

This brief is in furtherance of the Notice of Appeal, filed in this case on January 8,
2007.

The fees required under 37. C.F.R. § 41.20(b)(2), and any required petition for
extension of time for filing this brief and fees therefore, are dealt with in the accompanying
TRANSMITTAL OF APPEAL BRIEF.

03/08/2007 CNEGA1 00000031 09505449
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This brief comprises these subjects under the headings, and in the order, set forth below:

- I. Real Party in Interest
- II. Related Appeals and Interferences
- III. Status of Claims
- IV. Status of Amendments
- V. Summary of Claimed Subject Matter
- VI. Grounds for Rejection to be Reviewed on Appeal
- VII. Argument
- VIII. Conclusion
- IX. Claims Appendix
- X. Evidence Appendix
- XI. Related Proceedings Appendix

The final page of this brief bears the practitioner's signature.

REAL PARTY IN INTEREST

The real party in interest in this appeal is Sharp Laboratories of America, Inc., assignee of the captioned application.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN THE APPLICATION

There are 20 claims currently pending in the application.

B. STATUS OF ALL CLAIMS

Claims canceled: 21-26, 30-32

Claims withdrawn: 27-29

Claims pending: 1-20

Claims allowed: None

Claims objected to: None

Claims rejected: 1-20

C. CLAIMS ON APPEAL

Claims 1-20 are on appeal.

A copy of the claims on appeal is set forth in the Claims Appendix to this Brief.

STATUS OF AMENDMENTS

No amendment was filed after final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter is generally directed to a method of tracking a target object in a video system. In particular, and as claimed in independent claim 1, the claimed method may comprise the steps of: (a) initiating the object tracking system (*See* Specification at p. 7 lines 5-8); (b) automatically magnifying an image in response to initiating the object tracking system in

a manner free from further user input while the object tracking system is activated (*See* Specification at p. 7 lines 8-13); (c) selecting an object of interest in said image while the object tracking system is activated and the image is being magnified (*See* Specification at p. 7 lines 13-15; and (d) designating the object as the target of the tracking system while the image is being magnified and while the object tracking system is activated (*See* Specification at p. 7 lines 20-29), wherein the magnification is decreased automatically based upon a low confidence that the object is being tracked (*See* Specification at p. 9 lines 9-19).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection presented for review are whether claims 1-20 are unpatentable under 35 U.S.C. §103(a) over Abecassis, U.S. Pat. No. 5,610,653, in view of Loveland, U.S. Pat. No. 6,37,819, and in further view of Lee, U.S. Patent No. 6,507,366

ARGUMENT

The Examiner rejected claims 1-20 under 35 U.S.C. § 102(e) as being obvious in view of the combination of Abecassis, Loveland, and Lee. Independent claim 1, from which the remaining pending claims depend, recites the two limitations of “automatically magnifying an image in response to initiating said object tracking system free from further user input” and “wherein said magnification is decreased automatically based upon a low confidence that said object is being said tracked.” The Examiner, though conceding that the primary reference fails to disclose these limitations, contends that they are disclosed in the secondary references Lee and Loveland, respectively, and that it would be obvious to combine these secondary references with Abecassis so as to achieve the subject matter claimed. The Examiner is incorrect.

Abecassis discloses an automated tracking system in a video presentation where the video presented comprises a sequence of video frames previously captured and committed to a medium played for a viewer. One feature of Abecassis is that, if desired, a viewer may zoom in on a portion of a frame showing an object of interest and the system will automatically track that object in the center of a window zoomed in to a user-selected size. The object tracking is disclosed to be accomplished by one of two methods. In the first method, the creator of the video sequence may include, as part of the video data transmitted with the video, object identifiers along with mapping vectors that allow a system to continuously pinpoint the location of a selected object. *See* Abecassis at col. 42 lines 42-53. In the second method, the system automatically analyzes each frame for object identification indicia, such as a number on a targeted race vehicle, according to existing object detection techniques. *See* Abecassis at col. 42 line 55- col. 43 line3. *In both of these instances, the ability to identify the location of a user-selected object is unrelated to either the size of the viewing window, i.e. zoom level, or whether the object is even within the zoom window of the currently viewed frame.* In the first method, the system always knows the location of a chosen object because it is specifically mapped, frame by frame, by the content provider, hence there is never any need to “zoom out” to identify the location of the object or to automatically “zoom in” to allow a user to find the object. In the second method, although the user may select a zoom level for a *viewing window*, the object tracking system is only dependent on processing the pixel data for the frame, irrespective of what is being physically viewed by a user of the system. Thus, even in the circumstance where the system of Abecassis, for computational efficiency, only decodes that portion of a frame being viewed by a user, if by some happenstance a tracked object begins to move outside the frame, the solution would not be to *visually* zoom out from the size of the window specifically chosen by

the viewer, the solution would simply be to expand the area being mathematically decoded, while leaving the area of the viewing window constant, in accordance with the viewer's desires, as taught by Abecassis. See col. 41 lines 34-39. In neither circumstance would there ever be a need to depart from the viewer-chosen magnification.

A cursory review of the secondary references confirms this argument. Loveland discloses a video *camera* surveillance system where the camera may be zoomed out to reacquire a lost target being tracked, e.g. a potential shoplifter moving behind an obstruction. In that instance, the video *camera* is zoomed out, *as required*, because the only pixel information capable of being processed is that captured by the camera. In other words, if areas outside the viewing area need be examined to reacquire a lost target, the camera has to be zoomed out because there is no other way to capture the information outside of the current zoom range. This necessity is simply not present in Abecassis, where all pixel or image data has already been captured, and automatically reacquiring a lost target is simply a matter of *computationally examining* areas outside the viewing area, without the need visually display the extra area being examined.

Similarly, Lee also discloses a video camera surveillance system where a zoom *lens* is automatically adjusted to assist a user is locating an object to be tracked. This is irrelevant to the system of Abecassis, where there is no lens to be adjusted, and where the system initially displays the entire frame to a user, allowing the user to manually zoom in to an arbitrary, unpredictable user-selected window size. In fact, Abecassis specifically teaches away from automatic adjustments of the user-selected window size. See Abecassis at col. 41 lines 34-39 (“What is detailed herein, however, is a method of *automatically* maintaining the viewer defined target *within the viewer defined window* as the target moves within the image. Under control of

an application software the target *is* maintained *within the magnification of the image defined by the user.*")(emphasis added).

Therefore, the proposed combination asserted by the Examiner fails, not only because there would never be a motive to modify Abecassis as suggested by the Examiner, but also because Abecassis teaches away from automatically adjusting the viewer-selected magnification.

Therefore, the Examiner's rejection of claims 1-20 under 35 U.S.C. § 103(a) was improper and should be overturned.

CONCLUSION

The Examiner's respective rejections of claims 1-20 should be reversed, and the claims should be found patentable.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Kurt', followed by a long, wavy horizontal line.

Kurt Rohlf
Reg. No. 54,405
Attorney for Applicant
Telephone: (503) 227-5631

CLAIMS APPENDIX

1. In a video system, a method of tracking a target object comprising the steps of:
 - (a) initiating said object tracking system;
 - (b) automatically magnifying an image in response to initiating said object tracking system free from further user input while said object tracking system is activated;
 - (c) selecting an object of interest in said image while said object tracking system is activated and said image is being magnified; and
 - (d) designating said object as said target of said tracking system and said image is being magnified while said object tracking system is activated, wherein said magnification is decreased automatically based upon a low confidence that said object is being said tracked.
2. The method of claim 1 wherein said image is magnified by adjustment of an optical lens.
3. The method of claim 1 wherein said image is magnified by adjusting an electrical signal representing, at least, a part of said image.
4. The method of claim 1 wherein said magnification is an automatic result of said step of initiating said object tracking system.
5. The method of claim 1, further comprising the step of automatically changing the scale of said image following designation of said object as said target.

6. The method of claim 1 wherein said object of interest is selected by the steps of:

(a) moving a cursor to superimpose said cursor on said object of interest in said image; and

(b) signaling said tracking system that said cursor is superimposed on said object of interest.

7. The method of claim 1 wherein said step of designating is accomplished by using a touch sensitive display.

8. The method of claim 1 wherein said step of selecting said object of interest and said step of designating said object use a control mechanism that does not magnify said image.

9. The method of claim 1 wherein said steps of selecting and designating are performed simultaneously by touching a touch sensitive display.

10. The method of claim 9 wherein in response to initiating said object tracking system, said touch sensitive display is set to simultaneously perform said selecting and designating steps upon the next touch of said touch sensitive display.

11. The method of claim 6 wherein said image is magnified by adjustment of an optical lens.

12. The method of claim 6 wherein said image is magnified by adjusting an electrical signal representing, at least, a part of said image.

13. The method of claim 6 wherein said magnification is an automatic result of said step of initiating said object tracking system.

14. The method of claim 6 further comprising the step of automatically changing the scale of said image following designation of said object as said target.

15. The method of claim 1 wherein said object of interest is selected by the steps of:

- (a) moving said image to superimpose an image of a cursor on said object of interest;

and

- (b) signaling said tracking system that said cursor is superimposed on said object of interest.

16. The method of claim 15 wherein in response to initiating said object tracking system, a touch sensitive display is set to simultaneously perform said steps of selecting and said designating upon the next touch of said touch sensitive display.

17. The method of claim 15 wherein said image is magnified by adjustment of an optical lens.

18. The method of claim 15 wherein said image is magnified by adjusting an electrical signal representing, at least, a part of said image.

19. The method of claim 15 wherein said magnification is an automatic result of said initiating said object tracking system.

20. The method of claim 15 further comprising the step of automatically changing the scale of said image following designation of said object as said target.

21-26 (Canceled).

27 (Withdrawn). The method of advising an operator of the performance of an object tracking system comprising the steps of:

- (a) monitoring a level of confidence that said tracking system is tracking a target; and
- (b) altering magnification of an image visible to said operator in response to a change in said level of confidence.

28 (Withdrawn). The method of claim 27 wherein said magnification is changed as said level of confidence decreases.

29 (Withdrawn). The method of claim 27 wherein said magnification is decreased if said object tracking system loses track of said target.

30-32 (Canceled).

EVIDENCE APPENDIX:

None.

RELATED PROCEEDINGS APPENDIX:

None.